PIN97
ECONOMIC EVALUATIONS OF VARICELLA AND HERPES ZOSTER VACCINATION PROGRAMMES: A SYSTEMATIC REVIEW
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OBJECTIVES: This systematic review aimed to assess the cost-effectiveness of routine varicella and herpes zoster vaccination in high-income countries. **METHODS:** A PubMed search was performed for identifying English- and German-language publications on economic analysis of varicella and herpes zoster (HZ) vaccination programmes published before May 2013. A study was included if it was a full economic evaluation of a routine childhood or adolescent varicella vaccination programme and/or a HZ vaccination scheme targeting the elderly and if the study reported results for a high-income country as specified by the World Bank. To improve comparability between studies and across countries, all cost estimates were inflated to 2010 values applying country-specific consumer price indices and converted to Euros with the German level of purchasing power using purchasing power parities obtained from the Organisation for Economic Co-operation and Development. **RESULTS:** After the study selection process, 37 model-based studies remained to be included in the review. Routine childhood or adolescent varicella vaccination was cost-effective or cost-saving from a payer perspective and always cost-saving from a societal perspective when ignoring a potential impact on HZ due to exogenous boosting. The inclusion of the impact on HZ led to net QALY losses or incremental cost-effectiveness ratios exceeding commonly accepted thresholds. Additional HZ vaccination could partially mitigate this effect. Results of the studies only focusing on the evaluation of HZ vaccination ranged from EUR 1,200 to 291,240 per QALY in one study assessing multiple scenarios and from EUR 5,572 to 140,125 per QALY across all other studies. **CONCLUSIONS:** While cost-effectiveness of HZ vaccination was strongly dependent on the age of vaccination, cost-effectiveness of varicella vaccination was primarily dependent on the in- or exclusion of the potential impact on HZ. As a consequence, clarification on the role of exogenous boosting is crucial for decision-making regarding varicella vaccination.

PIN98
PREVENTION OF GRAM-POSITIVE INFECTIONS IN PERITONEAL DIALYSIS PATIENTS – A COST-EFFECTIVENESS ANALYSIS
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OBJECTIVES: Gram-positive bacteria cause clinically severe peritonitis and exit-site infection (ESI) in patients on peritoneal dialysis (PD). Incident PD patients are most prone to developing ESI and peritonitis within the first year of dialysis. We investigated the potential costs, quality of life, and clinical outcomes of incident PD patients with or without regular application of mupirocin on exit-site from the perspective of health care provider in Hong Kong. **METHODS:** We designed a decision tree to simulate potential outcomes of incident PD patients with and without regular application of mupirocin over a period of one year. Outcome measures included total direct medical cost per patient, quality-adjusted life-years (QALYs) gained and gram-positive bacterial infection-related mortality rate. Model inputs were derived from literature. Sensitivity analyses evaluated the impact of uncertainty in all model variables. **RESULTS:** In base-case analysis, the mupirocin group showed higher expected QALYs (0.6496 vs. 0.6456), lower infection-related mortality rate (0.18% vs. 1.64%) and lower total cost per patient (USD258 vs. USD1,661) comparing with the control group. Rate of gram-positive bacterial peritonitis without mupirocin and the risk of gram-positive bacterial peritonitis with mupirocin were identified to be potential influential factors. In 10,000 Monte Carlo simulations, mupirocin group was significantly ($p<0.001$) less costly, gained higher QALYs with lower mortality rate 99.9% of the time. **CONCLUSIONS:** Daily application of mupirocin at catheter exit-site during the first 12 months of PD seems to be cost-saving and effective in reducing mortality of PD-related gram-positive infections as well as improving health-related quality of life from the perspective of health care provider in Hong Kong.

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COST-EFFECTIVENESS ANALYSIS (CEA) OF LINEZOLID VERSUS VANCOMYCIN IN THE TREATMENT OF NOSOCOMIAL PNEUMONIA CAUSED BY METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA-NP) BASED ON A PHASE IV CLINICAL TRIAL: RESULTS FROM FOUR MAJOR CITIES IN CHINA
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OBJECTIVES: To assess the cost-effectiveness of linezolid versus vancomycin in the treatment of NP in four major cities (Beijing, Guangzhou, Nanjing, and Xi'an) in China. **METHODS:** We conducted cost-effectiveness analyses from Chinese payers' perspective piggybacked to a phase IV, randomized, double-blind, multicenter study (Wunderink et al, CID 2012) in MRSA-NP patients (microbiologic confirmed intent-to-treat cohort). Efficacy was measured by treatment success (defined as Cure+Improvement) at the end of study (i.e., 7-30 days after the end of treatment). Direct medical costs from four cities in China (¥, 2012) were calculated from the health care resource use data collected from the trial, including study medication, hospitalization, mechanical ventilation, and continuous renal replacement therapy. Nonparametric bootstrapping method was used to calculate confidence intervals (CI) for costs, efficacy, and incremental cost-effectiveness ratios (ICER). **RESULTS:** Data from 391 patients (186 linezolid, 205 vancomycin) were analyzed. More linezolid patients achieved treatment success vs. vancomycin patients [mean (95% CI)]: 55% (48.3%-61.9%) vs. 45% (38%-52.3%). The total treatment costs of linezolid vs. vancomycin were: ¥79,551(¥72,421-¥86,680) vs. ¥77,587(¥70,656-¥84,519) for Beijing, ¥90,995(¥82,598-¥99,393) vs. ¥89,448(¥81,295-¥97,601) for Guangzhou, ¥82,383(¥74,956-¥89,810) vs. ¥80,799(¥73,545-¥88,054) for Nanjing, and ¥59,413(¥54,366-¥64,460) vs. ¥57,804(¥52,613-¥62,996) for Xi'an. The ICER of linezolid over vancomycin were ¥19,719(-¥143,553-¥320,980), ¥15,532(-¥185,411-¥349,693), ¥15,904(-¥161,935-¥314,987), and ¥16,145(-¥100,738-¥234,412) per additional treatment success for Beijing, Guangzhou, Nanjing, and Xi'an, respectively. Out of 10,000 bootstrap simulations, majority cases had greater efficacies and higher costs for linezolid (in quadrant I of the E-EC plane: Beijing(64%), Guangzhou(59%), Nanjing(61%), Xi'an(66%)), more than one third had greater efficacies and lower costs for linezolid (linezolid dominated vancomycin: Beijing(33%), Guangzhou(38%), Nanjing(37%), Xi'an(32%)); only <2% had greater efficacies and lower costs for vancomycin in all cities (vancomycin dominated linezolid). **CONCLUSIONS:** In this clinical trial population, linezolid appears to be cost-effective from Chinese payers' perspective when compared to vancomycin in treating patients with nosocomial pneumonia caused by MRSA.

PIN100
ECONOMIC EVALUATION OF FLUOROQUINOLONE-BASED REGIMENS FOR THE TREATMENT OF COMMUNITY-ACQUIRED PNEUMONIA IN A MULTI-FIELD HOSPITAL IN RUSSIA
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OBJECTIVES: Respiratory fluoroquinolones are considered to be an important treatment option in hospitalized adults with community-acquired pneumonia (CAP). We aimed to compare cost-effectiveness of sequential intravenous to oral therapy of CAP with moxifloxacin and levofloxacin ± beta-lactam in a multi-field Russian hospital. **METHODS:** Standard search of prospective randomized clinical trials (RCT) was performed for the period since 1st Jan 1995 till 31st Dec 2012. RCTs quality was assessed by Jadad scale. Three RCTs with direct comparison of moxifloxacin vs. levofloxacin±ceftriaxone in adults with CAP required initial intravenous antimicrobial therapy [Torres A. 2008, File T.M. Jr. 2001, Anzueto A. 2006] were included in the analysis. As similar efficacy and safety was shown between comparators a cost-minimisation model was applied. Original drugs' costs were extracted from hospital receipt notes of three multi-field hospitals and wholesale prices database (www.pharmindex.ru). Cost of therapy was calculated to respective treatment regiments in selected trials: moxifloxacin 400 mg QD vs. levofloxacin 500 mg QD/BID±ceftriaxone 2 g QD for 11 days. Uncertainty was explored in a series of one- and two-way sensitivity analysis. **RESULTS:** The respective total drug therapy costs per patient were as follows: €249 for moxifloxacin vs. €161/€321 for levofloxacin QD/BID and €419/€579 for levofloxacin QD/BID+ceftriaxone. In levofloxacin monotherapy regimens the results were sensitive for IV therapy duration and oral/IV levofloxacin cost. In both levofloxacin+ceftriaxone regimens the results were insensitive to all variables of interest. **CONCLUSIONS:** Moxifloxacin is more cost effective strategy then levofloxacin+ceftriaxone for the treatment of hospitalized adults with CAP. The higher cost-effectiveness for moxifloxacin vs. levofloxacin monotherapy depends on IV therapy duration, levofloxacin regimen and oral/IV levofloxacin cost.

PIN101
ECONOMIC EVALUATION OF CEFTOBIPROLE COMPARED TO A COMBINATION OF LINEZOLID WITH CEFTAZIDIME IN THE MANAGEMENT OF HOSPITALISED PNEUNOMIA IN SCOTLAND
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OBJECTIVES: Ceftobiprole is a new i.v. anti-infective, which has bactericidal activity against difficult to treat Gram-positive (including multidrug-resistant pneumococci and methicillin-resistant Staphylococcus aureus; MRSA) and Gram-negative (including Pseudomonas aeruginosa) bacteria, which are important aetiological agents of nosocomial pneumonia (NP) and hospitalised community-acquired pneumonia (CAP). The objective of this analysis was to estimate the economic value of ceftobiprole (TID) compared to linezolid (BID)/ceftazidime (TID) in the treatment of hospitalised pneumonia patients in Scotland, when coverage of MRSA and Gram-negative pathogens, including P. aeruginosa,is required. **METHODS:** A cost-minimisation analysis, including only direct medical (drug) costs, was considered appropriate since the ceftobiprole phase 3 trials in NP and CAP demonstrated that ceftobiprole is non-inferior to a combination therapy consisting of linezolid and ceftazidime (NP) or ceftriaxone with or without linezolid (CAP). The base case model included drug acquisition, treatment duration, and administration costs. In additional scenario analyses, the cost-minimisation analysis included ICU and total hospitalisation costs as well. The resource use data were derived from the NP trial. **RESULTS:** Treatment with ceftobiprole resulted in a cost-saving of £258 per treated patient compared to linezolid/ceftazidime therapy. While no change in the drug budget is estimated, cost-savings are expected due to less administration time. Scenario analyses evaluated the reduction in length of ICU stay and overall hospital stay that will potentially lead to further cost savings for NHS Scotland (-£2,182 and -£904 per treated patient, respectively). **CONCLUSIONS:** This economic evaluation shows that ceftobiprole is at least a cost-neutral alternative to a combination of linezolid with ceftazidime and provides an effective and safe alternative for hospitalised pneumonia patients in Scotland.

PIN102
COST-MINIMIZATION ANALYSIS OF MARAVIROC VERSUS DARUNAVIR RALTEGRAVIR AND ENFUVIRTIDE FOR CCR5-TROPIC TREATMENT-EXPERIENCED PATIENTS WITH HIV INFECTION IN RUSSIA
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OBJECTIVES: New antiretroviral drugs have a major impact on future treatment options for treatment-experienced HIV-patients with antiretroviral resistance. The